

GLUSHKOVA, M.A.; SEYFER, M.A.

Interaction between vanadyl sulfate and sodium ferrocyanide.
Zhur.neorg.khim. 8 no.1:247-249 Ja '63, (MIRA 16:5)
(Vanadium sulfate) (Sodium ferrocyanide)

MARKOV, V.F. (deceased); GLUSHKOVA, M.A.; YERSHOVA, M.M.

Polymeric nature of ammonium dialuminium amidoheptachloride.
Zhur. neorg. khim. 9 no.5:1144-1146 My '64. (MIRA 17:9)

1. Institut obshchey i neorganicheskoy khimii imeni N.S.
Kurnakova AN SSSR.

ACCESSION NR: AP5014079

545.882:541.6

33

AUTHOR: Buslayev, Yu. A.; Sinitsyna, S. M.; Glushkova, M. A.; Yermolova, M. M.; Polikarpova, M. A.

TITLE: Niobium-base inorganic polymers

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 4, 1965, 498-502

TOPIC TAGS: ²¹niobium nitryl chloride, inorganic polymer, niobium chloride, infrared spectroscopy, polymer chain

ABSTRACT: The authors attempted to prepare niobium nitryl chloride NbNC_2 from NbCl_5 and NH_4Cl in nitrobenzene. The actual formulas of the products obtained were

"APPROVED FOR RELEASE: 09/24/2001

CIA-RDP86-00513R000515430001-2

were found to be unresponsive

15

Card 1/3

APPROVED FOR RELEASE: 09/24/2001

CIA-RDP86-00513R000515430001-2"

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova Akademi nauk SSSR (Institute of General and Inorganic Chemistry, Academy of Sciences SSSR)

Card 2/3

L 55951-65

ACCESSION NR: AP5014079

SUBMITTED: 19Jan65

NO REF SOV: 004

ENCL: 00

OTHER: 001

SUB CODE: IC

Card 3/3

L 62927-65 EWT(m)/EPF(c)/EPF(n)-2/EMP(j)/T/EMP(t)/EMP(b) LEP(c)/RPL

JD/WJ/RM
ACCESSION NR: AP5020504

UR/0078/65/10/001/1943/1945
546.185'171'1'131

AUTHOR: Glushkova, M. A.; Yershova, M. M.; Buslayev, Yu. A.

TITLE: Synthesis of phosphonitrile chloride in nitrobenzene

SOURCE: Zhurnal neorganicheskoy khimii, v. 10, no. 8, 1965, 1943-1945

TOPIC TAGS: phosphonitrile, nitrobenzene, chloride, polymer, synthetic material

ABSTRACT: Phosphonitrile chloride was synthesized in nitrobenzene from PCl_5 and NH_4Cl (1:1.2). The reaction was carried out for 5-6 hr at 140-150°C, and the yield was 70%. The composition of the products formed may be represented by the formula PNCl_2 . The crystalline mass formed apparently consists of a mixture of the trimer and tetramer of phosphonitrile chloride, whereas the rubberlike substance formed is a mixture of phosphonitrile chlorides with a higher degree of polymerization. The presence of carbon in the rubberlike compound indicates that nitrobenzene undergoes changes during the synthesis, and that the products of its decomposition are combined with phosphonitrile chloride. The solubility of many transition metal chlorides in nitrobenzene makes it possible to synthesize phosphonitrile chlorides in

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L 62927-65

ACCESSION NR: AP5020504

the presence of certain transition metal chlorides in order to obtain compounds with mixed inorganic links. Orig. art. has: 2 tables.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii Im. N. S. Kurnakova Akademii nauk SSSR (Institute of General and Inorganic Chemistry, Academy of Sciences, SSSR)

SUBMITTED: 13Nov64

ENCL: 00

SUB CODE: GC, MT

NO REF SOV: 003

OTHER: 001

Card 2/2

GLUSHKOVA, M.A.; YERSHOVA, M.M.; BUSLAYEV, Yu.A.

Synthesis of phosphonitrile chloride in nitrobenzene.
Zhur.neorg.khim. 10 no.8:1943-1945 Ag '65.

(MIRA 19:1)

1. Institut obshchey i neorganicheskoy khimii imeni N.S.Kurnakova
AN SSSR. Submitted November 13, 1964.

BOREVSKAYA, B.D., doktor meditsinskikh nauk; GLUSHKOVA, M.A.; MIKHEYEVA, M.I.

Some factors indicating renal function and chloride metabolism during systematic intake of Novo-Izhevsk mineral water. Urologiya 22 no.6:50-54 L-B '57. (MIRA 11:2)

1. Iz propedevticheskoy terapevticheskoy kliniki (zav. - prof. A.Ya., Gubergits) Izhevskogo meditsinskogo instituta.

(KIDNEY FUNCTION TESTS, eff. of drugs on mineral water from Novoizhevsk)

(CHLORIDES, metab.

eff. of Novoizhevsk mineral water)

(MINERAL WATER, eff.

Novoizhevsk mineral water, on renal funct. & on chloride metab.)

GRIGORENKO, P.G.; GLUSHKOVA, M.I.

Geomorphological characteristics of the cotton zone of southern
Kirghizia. Trudy Inst.geol.AN Kir.SSR no.6:179-187 '55.
(Kirghizistan--Physical geography) (MKIRA 10:2)

GLUSHKOVA, M.I.; GRIGORENKO, P.G.

The Osh Karasu Oasis; outline on physico-geographical conditions.
Izv.AN Kir.SSR no.2:101-111 '56. (MLRA 9:9)
(Osh Karasu Oasis--Physical geography)

GLUSHKOVA, N.I.

Relief and some agricultural characteristics of the foothills
region of Osh Province, Kirghiz S.S.R. Trudy Otd.geog.i Tian.
fiz.-geog.sta.AN Kir.SSR no.1:117-127 '58. (MIRA 12:2)
(Osh Province---Physical geography) (Osh Province---Agriculture)

GLUSHKOVA, M. I.

Main features of the orography and geomorphological division of
the southern Kirghizistan. Izv. AN Kir. SSR. Ser. est. i tekhn.
nauk 1 no.2:21-33 '59. (NIRA 13:9)
(Fergana Valley--Physical geography)

GLUSHKOVA, M. I.; GRIGORENKO, P. G.

Natural conditions of the Batken depression and prospects for the
utilization of its underground waters. Izv. AN Kir. SSR. Ser. est.
i tekhn. nauk 1 no.2:53-62 '59. (MIRA 13:9)

(Batken Districts--Geography)
(Batken District--Water, Underground)

GLUSHKOVA, M.I.; DANILINA, A.P.

Main features of the relief of the southwestern slopes of
the Fergana Range. Izv. AN Kir. S.S.R. Ser. est. i tekhn.
nauk 2 no.10:49-60 '60. (MIRA 17:3)

GLUSHKOVA, M. I., CAND GEOG SCI, "NATURAL CONDITIONS OF
THE PIEDMONDS OF THE SOUTHERN PART OF OSHKAYA OBLAST, IN
CONNECTION WITH THE DEVELOPMENT OF COTTON GROWING." MOS-
COW, 1961. (ACAD SCI USSR. INST OF GEOGRAPHY). (KL-DV,
11-61, 212).

GRIGORENKO, P.G.; GLUSHKOVA, M.I.; OTORBAYEV, K.O.

Natural conditions, hydrogeological characteristics, and ways
for the economic utilization of the Kugart Valley. Izv. AN Kir.
SSR. Ser. est. i tekhn. nauk 4 no.3:83-100 '62. (MIRA 15:11)
(Kugart Valley--Geology)
(Kugart Valley--Economic conditions)

BLAGOCERANOV, S.A.; GUMENENKO, A.I.

Distribution of clay kerol and the forms of karst relief in
Kirghizia, Sub. Tien'-Shan' upskoye. fiz.-geog. stud. no.5:
137-141 1971. (NDA 10:10)

DEREVITSKAYA, V.V.; GIUSHEKOVA, M.R.

Diphasic meningoencephalitis in Moscow Province. Zhur.mikrobiol. i imun. 29 no.2:39-44 F '59. (MIRA 11:4)

1. Iz Moskovskoy oblastnoy sanitarno-epidemiologicheskoy stantsii.
(MENINGOENCEPHALITIS, epidemiology,
diphasic, in Russia (Rus))

In duplicate results was 0.1% also. W. M. Stenaberg

M-T

GLUSHKOVA, N. A.

✓ The white-muscle disease in calves. A. P. Onegov, M. P. Mel'nikov, and N. A. Glushkova (Agr. Inst. Kirov). *Veterinariya* 33, No. 5, 65-8 (1986). The so-called white-muscle disease in cows, calves, and pigs is enzootic, and is connected with deficiencies in Co, Cu, Mn and I; the vitamin A, B₁, and C deficiency is a contributory factor. G. M. Kosolapoff

3

Card 2/2

USSR / Farm Animals. Small Horned Stock.

G-2

Obs Jour: Ref Zhur-Biol., No 22, 1968, 103701.

Author : Plushkova, M. A.
Inst : Kirov Agricultural Institute.
Title : Significance of Food Supplementation with Trace Elements in Sheep Breeding. Report I. Effect of Food Supplementation with Trace Elements (Cobalt, Copper and Iodine) on Morphology of Blood and Productivity of Sheep.

Orig Pub: Tr. Kirovskogo s.-kh. in-ta, 1967, 12, No 24, 193-196.

Abstract: The second group of sheep (60 heads), in addition to the basic ration (first group), was given daily per head 3 mg. of cobalt chloride and 8 mg. of copper sulfate. The third group (60 heads) was given 10 g. of iodized salt in

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Card 1/8

L 32108-65

ACCESSION NR: AE5005748

in the cloud above the level of the maximum speed of the ascending stream; at

1. 00007-07 INT(1) GW

ACC NR: AT6027420

SOURCE CODE: UR/3213/66/000/003/0129/0139

//

AUTHOR: Glushkova, N. I.

ORG: none

TITLE: A method for forecasting hail and torrential rain

SOURCE: Leningrad. Vysokogornyy geofizicheskiy institut. Trudy, no. 3(5), 1966. Mekhanizm obrazovaniya i vypadeniya grada (Mechanism of the formation and precipitation of hail), 129-139

TOPIC TAGS: hail, rain, cloud physics, *climate control, weather forecasting*

ABSTRACT: VGI, through a careful study of the processes of precipitation formation, has developed a new method of influencing convective clouds in order to prevent hail precipitation. The conditions necessary for hail formation are listed, and were used to construct graphs which are the basis for determining the type of precipitation to be expected for the particular condition prevailing. A mass of aerological synoptic material for days with hail and torrential rainfall in the northern Caucasus, the trans-Caucasus, the Ukrainian SSR and Moscow Oblast' was assembled and analyzed in order to verify the correctness of the conditions established for the graphical construction. The results of the analysis are charted. The high order of vindication of the method confirmed the correctness of the physical prerequisites

Card 1/2

L 09307-67

ACC NR: AT6027420

which are the basis for the method, and, accordingly, the correctness of the ideas on the mechanism involved in the formation of torrential downpours and hail developed by the VGI. Orig. art. has: 12 formulas, 6 figures and 3 tables.

SUB CODE: 04 / SUBM DATE: none / ORIG REF: 007 / OTH REF: 002

USPENSKAYA, L.N.; GLUSHKOVA, N.P.; BERGMAN, A.G.

Reciprocal solubility of salts in the system of barium and calcium chlorides and nitrates at temperatures from complete freezing to + 60°. Zhur.ob.khim. 25 no.9:1658-1673 S '55. (MIRA 9:2)

1. Rostovskiy-na-Donu gosudarstvennyy universitet.
(Barium salts) (Calcium salts)

GLUSHKOVA, N.I.; LAPCHEVA, V.F.

Forecasting showers and hail forming in air-mass cumulus congestus
clouds. Trudy Vysokogor. geofiz. inst. AN SSSR 2:195-198 '61.
(MIRA 14:12)
(Precipitation (Meteorology))

YAKOVLEVA, Ol'ga Sergeyevna; GLUSHKOVA, N.V., red.; SMIRNOVA, M.I.,
tekhn. red.

[School experiments and laboratory work for the course in human
anatomy and physiology] Shkol'nye opyty i laboratornye zaniatiia
po kursu anatomii i fiziologii cheloveka; posobie dlia prepoda-
vatelei biologii srednei shkoly. 2. izd. Moskva, Gos. uchebno-
pedagog. izd-vo M-va prosv. RSFSR, 1961. 167 p.

(MIRA 15:5)

(Anatomy, Human--Study and teaching)
(Physiology--Study and teaching)

U.S.S.R. Organic Chemistry. Synthetic Organic Chemistry.

E-2

Abstr Jour: Ref Zhur-Khimiya, No 6, 1957, 19254

Author : Dolgov B. N., Golodnikov G. V., Glushkova N. Ye.

Inst : ~~Sverdlovsk State U.~~

Title : Conversion of Tetraethylsilane over a Chromium Catalyst.

Orig Pub: Zh. obshch. khimii, 1956, 26, No 6, 1688-1691

Abstract: At 530-580° tetraethylsilane (I) over a chromium catalyst in an atmosphere of H_2 is decomposed into triethylsilane and H_2 . At 600-630° a deep hydrogenolysis ensues with the formation of C_2H_6 and Si. Dehydration of I to triethylvinylsilane is not observed.

Card : 1/1

SLV 79-28-10-17/61

AUTHORS: Dolgov, E. M., Kharitonov, M. P.,
Glushkova, M. Ye., Khudobin, Yu. I.

TITLE: Catalytic Dehydro Condensation of the Trialkyl Silanes
With Alcohols in the Presence of Metal Chlorides
(Kataliticheskaya degidrokondensatsiya trialkilsilanov so
spirtami v prisutstvi khloridov metallov)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol 28, Nr 10, pp 2710-2713,
(USSR)

ABSTRACT: The authors continued their investigations of the previous
paper on the catalytic dehydro condensation of the above-
mentioned silanes with oxy, oxo and polyoxy-organic compounds.
Earlier they used alkali alcoholates as catalysts for this
condensation of R_3SiH with alcohols (yields 80-90 %). In the
present paper moreover some small additions of various metal
chlorides are used, of which $ZnCl_2$ and $SnCl_2$ proved to be the
most active. The reaction velocity of R_3SiH with alcohols
depends on the nature and the quantity of metal chlorides. The
increase of the amount of chlorides from 0.05 to 1 gr. leads
to the increase of the reaction velocity, whereas the further
addition has no more influence. The reactions of methanol with

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Catalytic Dehydro Condensation of the Trialkyl Silanes With Alcohols in the Presence of Metal Chlorides SSR 79-28-10-17/60

triethyl silane at a ratio of 2:1 (Table 1) prove this. The increase in length of the alkyl radicals from CH_3 to $n-C_4H_9$ in alcohols of normal structure decreases the reaction velocity (Table 2, Experiments 1-3, 5). The difficulties in the spatial arrangement in the case of the presence of radicals of the iso-structure considerably decrease the reaction velocity (Table 2). The structure of the trialkyl silane exerts an important influence on the reaction velocity (Table 3). 11 trialkyl alkoxy silanes, 7 of which are new, were synthesized. The physical properties of the newly synthesized trialkylalkoxy silanes are given in table 4. The method described is of general character for the alkoxylation of the $Si-H$ bond, and makes it possible to obtain the trialkylalkoxy silanes in pure state. No side products are formed. There are 5 tables and 4 references, 2 of which are Soviet.

ASSOCIATION: Institut khimii silikatov Akademii nauk SSSR
(Institute of the Chemistry of Silicates of the Academy of Sciences, USSR)

Card 2/3

Catalytic Dehydro Condensation of the Trialkyl Silanes SOV/79-26-10-17, 61
With Alcohols in the Presence of Metal Chlorides

SUBMITTED: July 29, 1957

Card 3/3

GLUSHKOVA, N. YE.

42046
S/062/80/000/02/11/012
R005/R066

5 3700

AUTHORS: Dolgov B. N., Glushkova, N. Ye., Kharitonov, N. P.

TITLE: Some Properties of p-Trimethyl-silyl-benzaldehyde

PERIODICAL: Izvestiya Akademii nauk SSSR Otdeleniye khimicheskikh nauk.
1960, No. 2, pp. 351 - 355

TEXT: p-trimethyl-silyl-benzaldehyde gives reactions specific for the carbonyl group (silver mirror reaction, reaction with Schiff's reagent) and addition compounds with sodium bisulfite, 2,4-dinitro-phenyl hydrazine, semicarbazide, hydroxylamine, ammonia, and aromatic amines. In their experiments the authors obtained the bisulfite compound, the semicarbazone, and the oxime of p-trimethyl-silyl-benzaldehyde, the tri-(p-trimethyl-silyl)benzaldiamine and the p-trimethyl silyl-benzal aniline. Method of preparation and properties of the above compounds are described. The authors believe that the preparation of silicon-containing dyes of the triphenyl-methane series will be possible. There are 6 references: 1 Soviet and 5 American and English.

Card 1/2

1. The following is a summary of the results of the experiments conducted on the effect of the concentration of the reagent on the rate of the reaction. The results are shown in the table below.

Concentration of reagent (M)	Rate of reaction (min ⁻¹)
0.01	0.001
0.02	0.002
0.05	0.005
0.10	0.010
0.20	0.020
0.50	0.050
1.00	0.100

2. The following is a summary of the results of the experiments conducted on the effect of the temperature on the rate of the reaction. The results are shown in the table below.

Temperature (°C)	Rate of reaction (min ⁻¹)
10	0.001
20	0.002
30	0.005
40	0.010
50	0.020
60	0.050
70	0.100

3. The following is a summary of the results of the experiments conducted on the effect of the pH on the rate of the reaction. The results are shown in the table below.

pH	Rate of reaction (min ⁻¹)
1	0.001
2	0.002
3	0.005
4	0.010
5	0.020
6	0.050
7	0.100

4. The following is a summary of the results of the experiments conducted on the effect of the concentration of the catalyst on the rate of the reaction. The results are shown in the table below.

Concentration of catalyst (M)	Rate of reaction (min ⁻¹)
0.01	0.001
0.02	0.002
0.05	0.005
0.10	0.010
0.20	0.020
0.50	0.050
1.00	0.100

5. The following is a summary of the results of the experiments conducted on the effect of the concentration of the substrate on the rate of the reaction. The results are shown in the table below.

Concentration of substrate (M)	Rate of reaction (min ⁻¹)
0.01	0.001
0.02	0.002
0.05	0.005
0.10	0.010
0.20	0.020
0.50	0.050
1.00	0.100

250L3

S/C62/61/001/006/005 010

B110/B220

Condensation of α -trimethyl silyl...

Yu. M. Platonov is thanked for his assistance in making the analyses. There are 6 references: 3 Soviet-bloc and 3 non-Soviet-bloc. The two references to English-language publications read as follows: 1) A. I. Vogel, J. Chem. Soc. 1248 (1938); A. I. Vogel et al., J. Chem. Soc. 1952, 514. 2) R. G. Saverson, R. I. Rossoup et al., J. Amer. Chem. Soc. 79, 6540 (1957).

ASSOCIATION: Institut khimii silikatov Akademii nauk SSSR (Institute of Silicate Chemistry of the Academy of Sciences USSR)

SUBMITTED: July 4, 1960

Card 3/3

GLUSHKOVA, N.Ye.; KHARITONOV, N.P.

Interaction between p-trimethylsilylbenzaldehyde and organomagnesium compounds. Izv.AN SSSR. Ser.khim. no.1:78-83 Ja '64.

(MIRA 17:4)

1. Institut khimii silikatov im. I.V.Grebenshchikova AN SSSR.

GLUSHKOVA, N.Ye.;KHARITONOV, N.P.

Reaction of p-trimethylsilylbenzaldehyde with acids and their
derivatives. Izv. AN SSSR Ser. khim. no.11:2074-2076 N 164
(MIRA 18:1)

1. Institut khimii silikatov im. I.V. Grebenshchikova AN SSSR.

L 31893-66 EWT(m)/ETC(f)/ENP(j)/T RM/DS

ACC NR: AP6012535

(A)

SOURCE CODE: UR/0062/66/000/003/0564/0566

AUTHOR: Glushkova, N. Ye.; Kharitonov, N. P.

ORG: Institute of Chemistry of Silicates im. I. V. Grebenshchikov, Academy of Sciences SSSR (Institut khimii silikatov Akademii nauk SSSR)

TITLE: Reaction of benzaldehyde with alkyl (aryl) chlorosilanes

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 3, 1966, 564-566

TOPIC TAGS: organic synthesis, silane, silicon compound, UV irradiation

ABSTRACT: The present reproduces the preliminary results obtained during the reaction of benzaldehyde with phenyltrichlorosilane and methylphenyldichlorosilane and studies the effect of temperature, ultraviolet light and NiCl_2 on these reactions. During the addition of excess benzaldehyde and irradiation with ultraviolet light for 12 hrs, the main reaction products were organochlorodisiloxanes. It was found that during ordinary heating of the reaction mixture for 20 hrs the reaction proceeds to the extent of 5-7%. The addition of catalytic amounts of NiCl_2 increased formation of organochlorodisiloxanes (under the same conditions) to the extent of

Card 1/2

UDC: . 542.91 + 546.287

L 31883-66

ACC NR: AP6012535

9-14%. When SnCl_2 and, in particular, ZnCl_2 are used as catalysts, the reaction mixture turns to tar. Ultraviolet irradiation also helps the reaction of the formation of organochlorodisiloxanes. In all cases $\text{C}_6\text{H}_5\text{SiCl}_3$ is more reactive with benzaldehyde than $(\text{CH}_3)(\text{C}_6\text{H}_5)\text{SiCl}_2$. During the reaction of $p\text{-(CH}_3\text{)CC}_6\text{H}_4\text{CHO}$ with $\text{C}_6\text{H}_5\text{SiCl}_3$ and $(\text{CH}_3)(\text{C}_6\text{H}_5)\text{SiCl}_2$ in the presence of NiCl_2 (under conditions similar to the reaction of benzaldehyde), the yield for both chlorides was higher. As a result of the conducted reactions two organochlorodisiloxanes were isolated and characterized: 1,3-diphenyl-1,1,3,3-tetrachlorodisiloxane and 1,3-dimethyl-1,3-diphenyl-1,3-dichlorosiloxane. Orig. art. has: 2 tables.

SUB CODE: 07/ SUBM DATE: 23Jul65/ ORIG REF: 003/ OTH REF: 005

Card 2/2

KAZITSYNA, L.A.; LOKSHIN, B.V.; GLUSHKOVA, G.A.

Determination of the nitrile group from infrared spectra.

Aminonitrile hydrochlorides. Zhur.ob.khim. 32 no.5:1391-1395

My '62.

(MIRA 15:5)

(Nitriles--Spectra)

OKUNTSOV, M. M.; GOL'D, V. M.; GLUSHKOVA, R. I.

Participation of xanthophylls (violaxanthin and lutein) in the process of photosynthesis. Nauch. dokl. vys. shkoly; biol. nauki no.3:129-132 '62. (MIRA 15:7)

1. Rekomendovana kafedroy fiziologii i biokhimii rasteniy i laboratoriyey fotosinteza Tomskogo gosudarstvennogo universiteta im. V. V. Kuybysheva.

(PHOTOSYNTHESIS) (XANTHOPHYLL)

L 16*83-65 EWT(1)/EWP(a)/EPA(s)-2/EMT(m)/EEC(t)/EEC(b)-2/EWP(1) Pg.-4/Pt.-10
 IJP(c)/ESD(dp)/ESD(gs)/ESD(t)/ASD(a)-5/AS(mp)-2/AFMD(t) GG/WH
 ACCESSION NR: AP5000290 S/0070/64/009/006/0864/0869

AUTHORS: Zubov, V. G.; Firsova, M. M.; Glushkova, T. M.

TITLE: Kinetics of the variation of the dielectric constant of quartz under the influence of a constant electric field

SOURCE: Kristallografiya, v. 9, no. 6, 1964, 864-869

TOPIC TAGS: quartz, dielectric constant, temperature variation, impurity content

ABSTRACT: This is a continuation of an earlier investigation by the authors (Kristallografiya v. 8, No. 1, 112--114, 1963) of the anomalous behavior of the temperature variation of the dielectric constant ϵ_{33} of quartz. The present study is devoted to the kinetics of the variation of the dielectric constant at frequencies 1 Mcs and 1 kcs when a constant electric field is applied. The tests were made at 300--700C, and the setup employed is illustrated in Fig. 1 of the

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L 16583-65

ACCESSION NR: AP5000290

enclosure. The results have disclosed a hitherto unobserved phenomenon, namely that the dielectric constant begins to increase rapidly following the application of the constant electric field, passes through a maximum, after which it decreases slowly to a value corresponding to the dielectric constant at room temperature. The value, form, and time of reaching the maximum depend on the temperature and on the electric field applied. A satisfactory and noncontroversial interpretation of all the observed peculiarities can be made only by using the theory of A. F. Ioffe (Izv. Petrogradskogo politekhn. in-ta XXIV, 1915, pp. 62--126), whereby the impurity ions, which are always present in the quartz, enter directly into the structure of the crystal. These dissociated ions have sufficient mobility to participate in all the electric processes occurring in the crystal when the electric field is applied. Orig. art. has: 5 figures.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V.

Card 2/4

L 16583-65

ACCESSION NR: AP5000290

Lomonosova (Moscow State University)

SUBMITTED: 17Mar64

ENCL: 01

SUB CODE: SS,EM

NR REF SOV: 004

OTHER: 004

Card 3/4

L 16583-65

ACCESSION NR: AP5000290

ENCLOSURE: 01

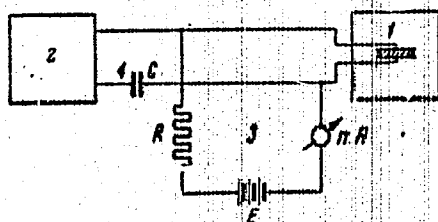


Fig. 1. Diagram of experimental setup.

1 - Holder with sample in oven, 2 - instrument for measurement of capacitance, 3 - electric cleaning circuit, 4 - decoupling capacitor

Card 4/4

Choshikova, V.B.

Chromium dioxide, its preparation, properties, and enthalpy of formation. S. A. Orlov, S. A. Shchegolev, and V. B. Choshikova. Zhur. Obshch. Khim. 13, 1241-5 (1941). CrO₂ prepared by the decomposition of CrO₃ at 420-450° under an O₂ pressure of 200-300 atm., has a tetragonal crystal structure and the dimensions of the elementary cell are: $a = 5.77 \pm 0.02$ Å, $c = 4.384 \pm 0.15$ Å. ($c/a = 1.31$). The cell contains 4 Cr atoms and 8 O atoms. CrO₂ is ferromagnetic with a Curie temp. of 115°. Values of the magnetic permeability above the Curie temp. show that the compd. is a true dioxide and not a mixed oxide (CrO₂-CrO₃). The enthalpy for the formation of CrO₂ is 130.4 ± 0.5 kcal. [J. Reyer Leach]

MAJ 1941

ARIYA, S.M.; SHCHUKAREV, S.A.; GLUSHKOVA, V.B.

Sublimation enthalpy of chromic and molybdic anhydrides. Zhur.
ob.khim.23 no.12:2063-2066 D 193. (MLRA 7.2)

1. Leningradskiy Gosudarstvennyy ordena Lenina universitet im.
A.A.Zhdanova. (Enthalpy) (anhydrides)

Category: USSR / Physical Chemistry - Kinetics. Combustion.
Explosives. Topochemistry. Catalysis.

B-9

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 30039

Author : Keler E. K., Glushkova V. B.
Inst : not given
Title : Conditions of Formation of Barium Silicates

Orig Pub: Zh. neorgan. khimii, 1956, 1, No 10, 2283-2293

Abstract: By means of thermal, chemical, x-ray diffraction and microscopic methods of analysis, it was ascertained that on heating of mixtures of different composition, of the system BaCO_3 (I) - SiO_2 (II), regardless of the composition of the initial mixture, the interaction between I and II begins only at 700° , with formation of barium metasilicate (III). At temperatures of 800° and above, barium orthosilicate (IV) is formed. In mixtures containing much I, at about 1000° , is formed, in addition to IV, also tribarium silicate. In mixtures containing much II, formation of III is observed only

Card : 1/2

-13-

Category: USSR / Physical Chemistry - Kinetics. Combustion.
Explosives. Topochemistry. Catalysis.

B-9

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 30039

above 1100° . Formation of $Ba_2Si_2O_7$ and $BaSi_2O_7$ by reactions in the solid phase, does not occur. It was found that decrease in volume of samples of I, which is noted at $600-800^{\circ}$, is due to decrease in porosity as a result of collective crystallization, and not to a polymorphous transformation. Increase in volume of samples of I and II at $1000-1200^{\circ}$, is due to increase in porosity of the samples, as a result of "swelling" of emitted CO_2 in the presence of liquid phase, and due to the fact that the reaction products have a larger molecular volume than the initial substances.

Card : 2/2

-14-

G/oshkova, U.B.

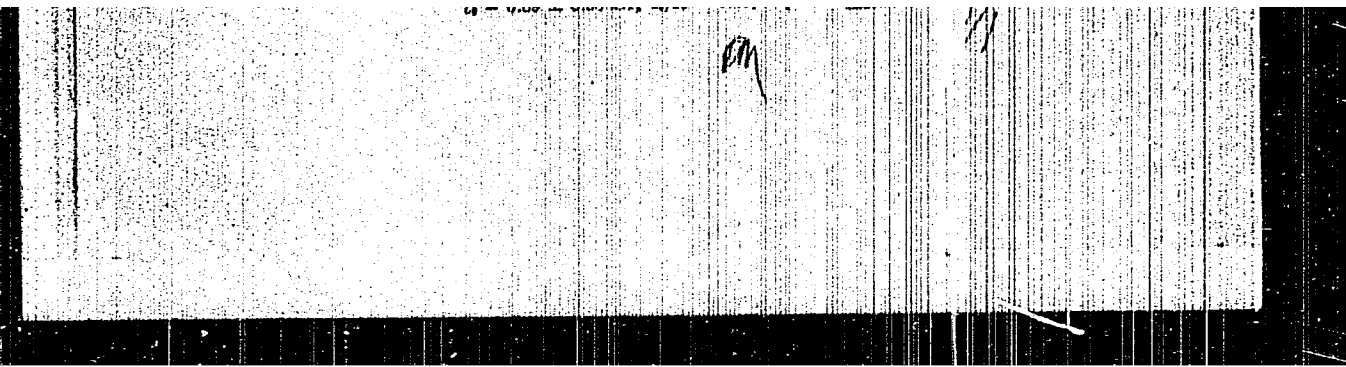
Conditions for the formation of barium silicates. II
Reaction of barium orthosilicate with silica. U.S. Pat. 2,812,112 (1958); Goshkova and U.B. Kel'er, *Zhur. Neorg. Khim.* 2: 1001-4 (1957); cf. C.A. 51, 6611c. The methods of complex thermal analysis (Kel'er and Kuznetsov, C.A. 44: 12614c), microscopic, x-ray, and chem. analysis were used to study the reaction in the BaO_2-SiO_2 system over a range of different compns. ($BaO_2:SiO_2$ ~ 3:1, 2:1, 1:1, 1:3). In all mixts., regardless of compn., the metasilicate or meta acid silicates, $BaSi_2O_5$ and $Ba_2Si_2O_7$, are formed. But only upon addn. heating in the orthosilicate formed. In mixts. rich in BaO_2 , $Ba_2Si_2O_7$ starts to form at 750-800°. In mixts. rich in SiO_2 , the basic silicates which are formed react with the excess SiO_2 at high temps. to form more acid silicates. The formation of barium orthosilicate from $Ba_2Si_2O_7$ and the metasilicate from barium orthosilicate starts at 1000-1100°. J. Roussig, *et al.*

G. Iushkova, V. B.

Distr: (E) 1
7 Conditions for the formation of the system of the
III. Preparation and protection of technical data.

"APPROVED FOR RELEASE: 09/24/2001

CIA-RDP86-00513R000515430001-2



APPROVED FOR RELEASE: 09/24/2001

CIA-RDP86-00513R000515430001-2"

GLUSHKOVA, V B

AUTHOR: None Given 32-58-4-32/44

TITLE: Dissertations. (Dissertatsii)
Branch of Chemical Sciences. (Otdeleniye khimicheskikh nauk).
July-December 1957 (Iyul'-dekabr' 1957g.)

PERIODICAL: Vestnik Akademii Nauk SSSR, 1957, No. 12, pp. 117-118 (USSR)

ABSTRACT: 5) At the Institute of Silicate Chemistry (Institut khimii silikatov) the following dissertations were defended:
a) For the degree of a Candidate of Chemical Sciences:
V. B. Glushkova - Determination of the Interactions in Solid Phases Between Silicon Dioxide and Oxides, As Well As Carbonates of Calcium, Strontium and Barium. (Izucheniye vzaimodeystviya v tverdykh fazakh mezhdu dvuokis'yu kremniya i okislami i karbonatami kal'tsiya, strontsiya i bariya).

Card 1/4 R. G. Grebenshchikov - The Physico-Chemical Investigation

Dissertations, Branch of Chemical Sciences,
July-December 1957

1958-1-32/14

of a Part of the Triple System
 NaF-RbF-BeF_2 and Its Analogy to the
 CaO-BaO-SiO_2 System. (Fiziko-khimi-
cheskoye issledovaniye i snasti treynoy
sistemy NaF-RbF-BeF_2 i yeye analogiya
s sistemy CaO-BaO-SiO_2).

- b) For the degree of a Candidate of Technical Sciences:
M. A. Kiyler - Investigation of the Configuration and
Crystallization of Ash-Containing Slate
Fusions (Issledovaniye protsessov obrazovaniya
i kristallizatsii slantsevol'nykh rasplavov)
- c) At the Institute for Chemical Physics (Institut khimicheskoy fiziki) the following dissertations were defended:
a) for the degree of a Doctor of Technical Sciences:
A. N. Voinov - Investigation of the Detonation and of the
Spontaneous Ignition Under Conditions of a
Light-Fuel Engine. (Issledovaniye detonatsii
i samovosplameneniya v usloviyakh dvigatelya
legkogo topliva).

Card 2/4

Dissertations Branch of Chemical Sciences.
July-December 1957

51-98-a-32/44

- b) For the degree of a Candidate of Chemical Sciences:
V. I. Vedeneyev - Energy of the Break of Compounds in Organic Molecules and Their Utilization in Chemical Kinetics. (Energiya razryva svyazey v organicheskikh molekulakh i ikh ispol'zovaniye v khimicheskoy kinetike).
- c) For the degree of a Candidate of Physico-Mathematical Sciences:
Ye. L. Frankevich - Mass-Spectrometrical Investigation of Elementary Ionic-Molecular Processes in the Gas Phase. (Mass-spektrometricheskoye issledovaniye elementarnykh ionno-molekulyarnykh protsessov v gazovoy faze).
- 7) At the Radium Institute imeni V. G. Khlopina (Radiyeviy institut imeni V. G. Khlopina) the following dissertations for the degree of a Candidate of Physico-Mathematical Sciences were defended:

Card 3/4

Dissertations. Branch of Chemical Sciences.
July-December 1957

50-58-1 12/44

- K. Ya. Gromov - Conversion Electrons of Lutetium and Thulium Isotopes Deficient in Neutrons (Konversionnyye elektrony neytronodefitsitnykh izotopov lyutetsiya i tuliya)
- O. V. Lezhkin - Multi-Charged Particles in Nuclear Fissions Caused by Protons with an Energy of 300-600 MeV. (Mnogozaryadnyye chastitsy v yadernykh rasshchepleniyyakh, vyzyvayemykh protonami s energiyey 300-600 meV).

1. Chemistry--Bibliography 2. Bibliography--Chemistry

Card 4/4

GLUSHKOVA, V.B., KEIER, E.K.

Conditions of the preparation and rates of formation of barium
silicates. Zhur. neorg. khim. 5 no.4:882-890 Ap '60.

(MIRA 13:7)

1. Institut khimii silikatov Akademii nauk SSSR.
(Barium silicate)

S/080/61/034/001/017/020
A057/A-29

15 2100 1142, 1273, 1153
21.1310

AUTHORS: Sergeyeva, V.I., Glushkova, V.B., Keler, E.K.

TITLE: Physical and Technical Properties of Barium and Strontium Silicates

PERIODICAL: Zhurnal Prikladnoy Khimii, 1961, Vol. 34, No. 1, pp. 212-214

TEXT: Synthesis and sintering of single barium and strontium silicates with mineralization admixtures were investigated, and the physical and technical properties of the sintered samples were determined. Concretes containing these silicates have a greater resistance to sea water, they are heat-resistant and have X- and gamma-ray shielding properties. Besides, these silicates are used for special ceramics and phosphors. Nevertheless they are insufficiently studied. Hadley et al. [Ref.2: J.Applied Physics, 27, 11, 1384 (1956)] briefly reported on some physical properties of barium orthosilicate. The present authors determined in previous investigations [Ref.3: ZhNKh, 1, 10, 2283 (1956), Ref.4: ZhPKh, 30, 4, 517 (1957)] formation conditions of barium- and strontium-silicates. In the present work the silicates were synthesized from dry silicic acid and barium- as well as strontium-carbonate in silite ovens
Card 1/6

22532

S/080/61/034/001/017/020

A057/A129

Physical and Technical Properties of Barium and Strontium Silicates

at 1,200°-1,400°C. The sintered material was milled by batches after each 4 hrs of sintering, briquetted (at 200 atm pressure) and sintered again to accelerate synthesis of the components. Duration of the total sintering process was 32-56 hrs. The synthesized silicates were sieved and articles were pressed at 500 atm adding 7-10% of kerosene by weight to decrease lamination of the material. The articles were fired at different temperatures, and the physical and mechanical properties were determined. In order to obtain samples of small porosity, mineralizers (Na_2CO_3 , BaCl_2 , ZnO , SrCl_2 , MgF_2 , B_2O_3 , and Al_2O_3) in amounts of 1-1.5% of weight were mixed with the synthesized silicates. The strongest influence have Al_2O_3 and B_2O_3 admixtures (the latter on Ba_2SiO_4). They form a liquid phase at 1,350°-1,400°C by melting of the eutectic in this ternary system. According to these results Al_2O_3 and B_2O_3 admixtures were used to prepare sintered samples. Physical and technical properties of the investigated samples demonstrate (see Table) that additions of Al_2O_3 and B_2O_3 in the amount of 1-1.5% by weight decrease porosity, increase mechanical strength (except $\text{Ba}_2\text{SiO}_4 + 1\% \text{B}_2\text{O}_3$) and the modulus of elasticity and bending. Al_2O_3 admixtures practically do not change the heat-re-

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S/080/61/034/001/017/020
A057/A129

Physical and Technical Properties of Barium and Strontium Silicates

sistance of the material. The dielectric constant increases with BaO- and SrO-content in the silicate. Barium silicates have a lower temperature coefficient of dielectric constant. The present investigation demonstrates that improvement and increase in mechanical properties of barium- and strontium-silicates were effected by sintering with admixtures of mineralizers. There are 1 table and 4 references: 2 Soviet-bloc, 2 non-Soviet-bloc.

ASSOCIATION: Institut khimii silikatov AN SSSR (Institute for Silicate Chemistry of the AS USSR)

SUBMITTED: May 10, 1960

Card 3/6

MATVEYEV A., prof., doktor tekhn. nauk, otv. red.; BUDNIKOV
P.P., akademik, red.; TOROPOV N.A., red.; GLUSHKOVA,
V.B., kand. khim. nauk, red.; ZUYEVA, V.F., nauchn. red.

[Silicates and oxides in the chemistry of high temperatures]
Silikaty i oksidy v khimii vysokikh temperatur. Moskva, In-
t khimii silikatov im. I.V.Grebenshchikova. 1963. 382 p.
(MIRA 17:12)

1. Akademiya nauk Ukr.SSR (for Budnikov). 2. Chlen-
korrespondent AN SSSR (for Toropov).

S/030/63/000/003/013/014
B117/B186

AUTHORS: Toropov, N. A., Corresponding Member AS USSR, Glushkova, V. B., Candidate of Chemical Sciences

TITLE: Silicates and oxides in high-temperature chemistry
(Conference in Leningrad)

PERIODICAL: Akademiya nauk SSSR. Vestnik, no. 3, 1963, 134-135

TEXT: From November 21 to 24, 1962 a conference took place in Leningrad on the study of the behavior of substances at high temperatures and on pertinent experimental methods. The conference had been convened by the Institut khimii silkatov im. I. V. Grebenshchikova Akademii nauk SSSR (Institute of Silicate Chemistry imeni I. V. Grebenshchikov of the Academy of Sciences USSR) and was attended by representatives of 82 scientific research institutions, universities and, industrial enterprises from more than 20 towns of the USSR. The director of the Institute, Corresponding Member N. A. Toropov, gave a survey on the present state of the investigations into the physical and chemical properties of ceramic substances in the USSR. N. V. Belov spoke about the crystallo-
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S/030/63/000/003/013/014
B117/B186

Silicates and oxides in high-...

chemical explanation of some characteristic features in the behavior of oxides at high temperatures. S. M. Ariya and M. P. Morozova dealt with the rules governing the changes in phase composition in systems "transition metal - oxygen" with temperature increase. The synthesis and the properties of compounds of rare and rare-earth elements and the effect of the gaseous medium on reactions in solid phase in systems with oxides of different valencies was dealt with by A. I. Leonov, N. A. Godina, I. A. Bondar', V. A. Bron, N. V. Semkina, Ya. I. Smagina. The effect of Ba^{+2} , Ca^{+2} , and Be^{+2} in quantities of 0.1 - 0.5 atom%, the kinetics of mullite formation in aluminosilicate mixtures jointly precipitated were reported by P. P. Budnikov, T. N. Keshinyan, A. V. Volkova. The study of silicates of the alkaline earth metals was described by N. G. Grebenshchikov, L. Ya. Markovskiy, A. A. Kolpakov, Yu. P. Sapozhnikov. Studies of the thermodynamic properties of oxides and salts by the electrochemical method at $800 - 1150^{\circ}C$ were reported by T. N. Resukhina, V. A. Levitskiy, A. N. Golubenko. The diffusion of molybdenum and iron into various materials was treated by A. I. Borisenko, V. I. Izvekov and N. S. Gorbunov. So was the analysis of thermodynamic calculations of reactions in solid phase at high

cont. 2/4

S/030/63/000/003/013/014
B117/B186

Silicates and oxides in high-...

temperatures by V. B. Glushkova. Problems in the breeding of mono-crystals of different silicate substances were dealt with at a special meeting by S. G. Tresvyatskiy, A. D. Fedoseyev, L. G. Grigor'yeva, T. A. Makarova, D. P. Grigor'yev. Also, Ye. V. Klyucharev spoke about the studies of phase transformations and properties of high-temperature compounds; G. V. Kukolev, M. T. Mel'nik, N. N. Shapovalova about the properties of low-basic calcium aluminates; A. K. Zarklit, Ye. R. Skuye, L. A. Kosheleva, B. A. Polonskiy on the sintering and the crystallization of molten quartz in hot pressing. Lectures on apparatus: N. V. Golubtsov "Some instruments for studying vacuum processes"; P. F. Rummyantsev "Application of the high-temperature microscope for studying silicates". Lectures on methods: E. A. Keler: on the application of complex thermography for studying high-temperature processes; V. V. Fesenko, A. S. Bolgar: on the investigation of physical and physico-chemical properties of low-melting compounds at 3500°K; E. E. Shpilman, A. Ye. Sheyndlin, N. V. Boyko, V. Ya. Chekhovskoy, V. A. Petrov, on the determination of the thermal conductivity at 1500°C and some thermo-physical properties up to 2500°C; S. F. Pal'guyev A. D. Neuymin spoke

Card 3/4

Silicates and oxides in high-...

S/030/63/000/003/013/014
B117/B186

about the investigation of the nature of conductance and conductivity of highly refractory oxides. In this conference a large contribution was made to the coordination of the work of scientific research institutions, universities, and industrial enterprises in the field of silicates and oxides in high-temperature chemistry.

Card 4/4

GLUSHKOVA, V.B.; KEIER, E.K.

Polymerism of lanthanum oxide. Dokl. AN SSSR 152 no.3:611-614
S '63. (MIRA 16:12)

1. Institut khimii silikatov im. I.V.Dobrenchenkova AN SSSR.
Predstavleno akademikom A.N.Frumkinym.

ACCESSION NR: A4039617

S/0076/64/038/005/1126/1134

AUTHORS: Glushkova, V.B. (Leningrad); Sokolov, Yu.G. (Leningrad);
Keler, E.K. (Leningrad)

TITLE: Oxidation of metallic neodymium and the rate of the C \rightarrow A
polymorphic transformation of Nd sub 2 O sub 3

SOURCE: Zhurnal fizicheskoy khimii, v. 38, no. 5, 1964, 1126-1134

TOPIC TAGS: neodymium oxidation, neodymium oxidation rate, neodymium
sequioxide, neodymium sequioxide A, neodymium sequioxide O, neo-
dymium oxide C-A transformation, neodymium oxide crystal lattice,
neodymium sequioxide stable form, anion vacancy, cation vacancy

ABSTRACT: The oxidation rate of powdered Nd was studied in the air
and in thoroughly dried oxygen. The equipment, which is described
and figured, was set up so as to provide for continuous weighing of
the 0.1 - 0.3 g sample at 1.10^{-1} to 760 mm Hg pressures and 20-1500C
temperatures. In preliminary tests with oxygen it was found that at
an oxygen pressure of over 10 mm Hg the oxidation rate does not
depend upon further pressure changes. Thus tests were then conducted
at 100 mm pressure. The results are tabulated and graphed. At 240-

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ACCESSION NR: AP4039617

3000 temperatures the oxidation rate showed linear dependency; this decreased as the oxide layer increased so as to become a parabolic curve. In dry oxygen the constant of the oxidation rate was found: $C = 6.10 \cdot 10^9 \text{ min}^{-1}$ and the activation energy $E = 38.93 \pm 0.05 \text{ kcal}$. The A-form was produced upon oxidation in dry oxygen at 250 - 5000 (X-ray determination) and was the only stable form of the sesquioxide up to 1200C. In another series of tests investigation the change C \rightarrow A Nd_2O_3 at various temperatures the cubic form was used as starter material. The change was shown to occur at 800-100C and did not reverse upon subsequent cooling. The rate of transformation C \rightarrow A depended upon the degree of perfection of the crystal lattice of the metastable C-form. Lesser perfection resulted in transformation at lower temperatures. The activation energy of the 99.9% pure specimen was $E = 100.26 - 0.04 \text{ kcal}$ and the constant $C = 1.03 \cdot 10^{16} \text{ min}^{-1}$. Orig. art. has: 6 tables, 6 figures and 4 formulas.

ASSOCIATION: Institut khimii silikatov im. I.V. Grebenchshikova AN SSSR
(Institute of Silicate Chemistry, AN SSSR)

SUBMITTED: 26Apr63

ENCL: 00

SUB CODE: GC, IC

NR REF SOV: 006

OTHER: 011

Card 2/2

Card

Card 1/4

L 19592-65 EWG(j)/EWT(m)/EPF(r)/EPR/ENP(t)/ENP(b) Pr-Lt/Pt-Lt IJP(c)/
ASD(f)-3/FSD(t) JD/JG

ACCESSION NR: AP4045100

S/0020/64/158/001/0151/0154

AUTHOR: Glushkova, V. B.; Keler, E. K.; Sokolov, Yu. G.; Semenov, N. N.

TITLE: Reaction of Nd_2O_3 with water

SOURCE: AN SSSR. Doklady*, v. 158, no. 1, 1964, 151-154

TOPIC TAGS: neodymium oxide water system, neodymium oxide, hydrate, stability, structure

ABSTRACT: The Nd_2O_3 -water system was studied: neodymium oxide hydrates were obtained by hydrothermal synthesis; neodymium oxides were reacted with water at different temperatures and under different relative humidities; and the stability and structure of the hydrated neodymium oxides were determined. Both the A- and C- modification of Nd_2O_3 were formed in a relative moist atmosphere of 25-95%. At 35 C the A-form was stable to water vapor while the C-form hydrated to $3\text{Nd}_2\text{O}_3 \cdot 2\text{H}_2\text{O}$ (I). I was also formed by the C-form at 90-100C regardless of humidity, while the A-form formed the trihydrate $\text{Nd}_2\text{O}_3 \cdot 3\text{H}_2\text{O}$. In the 100-400C range the C-form gained weight (with accompanying crystal lattice dis-

Card 1/2

L 19592-65

ACCESSION NR: AP4045100

tortion) in moist oxygen or moist argon, forming I, but no higher oxides. I started to decompose at ~250 C to $\text{Nd}_2\text{O}_3 \cdot \text{H}_2\text{O}$, which at 450 C formed $3\text{Nd}_2\text{O}_3 \cdot \text{H}_2\text{O}$. The latter reverted to the hexagonal A-form Nd_2O_3 at 800-1000 C. The elementary cell parameters were determined for these compounds. It was concluded the phases generally assumed to be the C-form were actually the hydrate $3\text{Nd}_2\text{O}_3 \cdot \text{H}_2\text{O}$. Orig. art. has: 2 figures

ASSOCIATION: Institut khimii silikatov im. I. V. Grebenshchikova Akademii nauk SSSR (Institute of Silicate Chemistry Academy of Sciences, SSSR)

SUBMITTED: 20Apr64

ENCL: 00

SUB CODE: IC, GC

NO REF SOV: 003

OTHER: 008

Card 2/2

L 64185-65 EWT(m)/EWP(t)/EWP(h) IJP(c) ID/JG
 ACCESSION NR: AP5019775 UR/0062/65/004/007/1131/1138
 546.65 + 548.33

AUTHOR: Glushkova, V. B.; Boganov, A. G.

TITLE: Polymorphism of rare earth sesquioxides

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 7, 1965, 1131-1138

TOPIC TAGS: rare earth oxide, polymorphism

ABSTRACT: The polymorphism of rare earth sesquioxides was studied in the following three aspects: (1) effect of conditions of preparation of the oxides on their phase state and determination of the lowest temperatures at which the pure oxides can be obtained from various compounds; (2) study of the presence of reversible polymorphic transformations in the sesquioxides; (3) study of irreversible or slow polymorphic transformations. High-temperature x-ray and thermal analysis established the absence of polymorphic transformations in the 50-1500° range in the following oxides: Y₂O₃, La₂O₃, Nd₂O₃, Sm₂O₃, Eu₂O₃, Gd₂O₃, Dy₂O₃, Ho₂O₃, Er₂O₃, Tm₂O₃, and Yb₂O₃. X-ray diffraction analysis confirmed the presence of irreversible transitions in Nd₂O₃, Sm₂O₃, Eu₂O₃, Gd₂O₃, and their absence at 100-1500° in Y₂O₃, Dy₂O₃, Ho₂O₃, Er₂O₃, Tb₂O₃, and Tm₂O₃. It was shown that the low-temperature C-form of lanthanum

Card 1/2

L 64185-65

ACCESSION NR: AP5019775

oxide cannot be obtained by decomposing oxygen salts or the hydroxide while heating in air at pressure from 1 to 760 mm Hg. The C-form of neodymium oxide was obtained by decomposing neodymium nitrate, carbonate, oxalate, and hydroxide. The irreversible transitions $C \rightarrow A$ Nd_2O_3 and $C \rightarrow B$ Sm_2O_3 are associated with a considerable evolution of gas (1.5-2 wt. %). It is postulated that the low-temperature forms of oxides of neodymium, samarium, gadolinium, and europium are metastable modifications which are thermodynamically stable in their temperature range of existence only because of the presence of foreign ions in the oxide lattice. Orig. art. has: 4 figures, 4 tables.

ASSOCIATION: Institut khimii silikatov im. I. V. Grebenshchikova Akademii nauk SSSR
(Institute of Silicate Chemistry, Academy of Sciences SSSR)

SUBMITTED: 10Jun63

ENCL: 00

SUB CODE: IC

NO REF SOV: 004

OTHER: 023

Card 2/2 *mlb*

L 58705-65 ENG(j)/EWP(a)/EWT(m)/EPT(c)/EPR(t)/EWP(t)/EWP(k)/EWP(z)/EWP(b)/EWA(c)
 PF-4/Pr-4/Ps-4 IJP(c) JD/JG

ACCESSION NR: AP5016590

UR/0363/65/001/006/0743/0750
 541.123.35:542.65

AUTHOR: Davtyan, I. A.; Glushkova, V. B.; Keler, E. K.

TITLE: A study of the system neodymium trioxide - zirconium dioxide: regions rich in zirconium dioxide

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 5, 1965, 743-750

TOPIC TAGS: neodymium oxide, zirconium oxide, mixed oxide structure, phase diagram

ABSTRACT: Pressed powder mixtures of ZrO_2 and Nd_2O_3 containing various proportions of the two components were fired at 600-1700C for various periods of time; some mixtures were prepared by decomposing mixed nitrates or by coprecipitating the hydroxides. In the latter two cases the reaction was considerably faster, and its course was sometimes different. X-ray analysis revealed that additions of Nd_2O_3 lower the temperature of the monoclinic - tetragonal polymorphic transformation of ZrO_2 . The unit cell parameters of ZrO_2 and its solid solutions were calculated for various temperatures. The stability of ZrO_2 - Nd_2O_3 solid solutions was studied, and x-ray diffraction patterns of these solutions annealed from 1600C were taken. The changes in the volume of the unit cell and

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L 58705-65

ACCESSION NR: AP5016590

2
in constant of solid solutions of the fluorite and pyrochlore type in the $ZrO_2 - Nd_2O_3$ system were plotted against the Nd_2O_3 content. It was shown that cubic solid solutions containing less than 20% Nd_2O_3 decompose into a mixture of two solid solutions at temperatures below 1600C, one tetragonal (or monoclinic), the other cubic (pyrochlore type). The boundaries of the biphasic region were also determined. "In conclusion, the authors express their thanks to Yu. G. Sokolov for assistance in the x-ray analyses." Orig. art. has: 5 figures, 4 tables and 2 formulas.

ASSOCIATION: Institut khimii silikatov im. I. V. Grebenshchikova Akademii nauk SSSR (Institute of Silicate Chemistry, Academy of Sciences, USSR)

SUBMITTED: 16Jan65

ENCL: 00

SUB CODE: IC, SS

NO REF NOV: 000

OTHER: 005

dm
Card

2/2

1. The following information was obtained from the report of the

author of the report, who is a member of the staff of the
Photographic and Technical Services Group, Inc. (PTSG),
12345 12th St., N.W., Washington, D.C. 20004.

2. The report was obtained from the author of the report, who is a
member of the staff of the PTSG, 12345 12th St., N.W., Washington, D.C. 20004.

L 1558-66 EWT(m)/EPT(c)/EPT(n)-2/EMP(j)/EMP(t)/EMP(b)/ETC(m) IJP(o)/RPL

JD/WW/JW/JG/RM

ACCESSION NR: AP5022266

UR/0363/65/001/007/1143/1151

55
52
B

AUTHOR: Glushkova, V. B.; Isupova, Ye. N.

TITLE: Thermodynamic calculations of solid phase reactions between oxides of elements of groups II and IV of the periodic table

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 7, 1965, 1143-1151

TOPIC TAGS: thermodynamic calculation, titanate, silicate, zirconate, heat capacity, enthalpy, entropy, beryllium compound, titanium oxide, thermochemistry

ABSTRACT: An analysis of the thermodynamic calculations for solid-phase processes occurring at high temperatures was carried out in which the following formulas were employed:

$$\left(\Delta G_T = \Delta H_T - T\Delta S_T; \Delta G_T^0 = \Delta H_{T=0}^0 + T \cdot \Delta / e; / e / = \left(\frac{G_T^0 - H(T^0)}{T} \right) \right)$$

Methods of calculation of the temperature dependence of the heat capacity C_p are analyzed for the case of titanates, silicates, and zirconates of elements of group II, and the values obtained are compared. A comparison between the methods

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L 1558-66
ACCESSION NR: AP5022266

of calculating the enthalpies of formation is also made. The methods described account for the instability of oxides of elements in groups II and IV; for example, it is shown that from the thermochemical standpoint, no compounds can form in the BeO-TiO₂ system. The thermodynamic instability of beryllium orthosilicate in the absence of mineralizers is also substantiated. Orig. art. has: 2 figures, 4 tables, and 7 formulas.

ASSOCIATION: Institut khimii silikatov im. I. V. Grebenshchikova Akademii nauk SSSR (Institute of Silicate Chemistry, Academy of Sciences, SSSR)

SUBMITTED: 01Feb65

ENCL: 00

SUB CODE: SS, TD

NO REF SOV: 018

OTHER: 012

Card

2/2

L 11003-66 EWT(m)/EWP(t)/EWP(h) IJP(c) JD
ACC NR: AP5028727 SOURCE CODE: UR/0363/65/001/011/1955/1964

AUTHOR: Giushkova, V. B.; Davtyan, I. A.; Keler, E. K.

ORG: Institute of Silicate Chemistry im. I. V. Grebenshchikov, Academy of Sciences
SSSR (Institut khimii silikatov Akademii nauk SSSR)

TITLE: The Nd_2O_3 - ZrO_2 system. Study of regions rich in neodymium oxide ✓

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 11, 1965,
1955-1964

TOPIC TAGS: neodymium compound, zirconium compound, solid solution, metal phase
system, metal chemical analysis, x ray analysis, phase transition, phase diagram,
chemical stability, phase composition, crystal structure, inorganic oxide
ABSTRACT: Chemical and x-ray phase analyses were used to study the Nd_2O_3 - ZrO_2 system
and a diagram of phase transitions was plotted for a region rich in Nd_2O_3 . The sta-
bility of the cubic solid solution based on Nd_2O_3 was determined and the solution
was shown to be stable only above 1500°C . It was found that the primary phase con-
sists of cubic solid solutions when the mixtures are prepared by coprecipitating in
the amorphous state followed by crystallization at 400 - 800°C or by decomposing a mix-
ture of nitrates. As the composition of these metastable solid solutions changes
monotonically, there is continuous change in their crystal structure from the Nd_2O_3 -
type--characteristic of the low-temperature C-form of Nd_2O_3 via the pyrochlore type--
to the fluorite type in which the low-temperature form of ZrO_2 crystallizes. The

UDC: 546.657 + 546.831

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L 11003-66

ACC NR: AP5028727

effect of the addition of ZrO_2 on the C-A transition of Nd_2O_3 was studied and it was shown that small amounts of ZrO_2 hinder the transition of the cubic solid solution (C-form) to the hexagonal (A). Where there is a high ZrO_2 content (10-20%) in the cubic solid solution, the intermediate product formed is a solid solution which crystallizes in a low symmetry (B-type). On heating to 1350-1400°C, the latter converts into an equilibrium mixture of solid solutions with hexagonal and pyrochlore structure. Orig. art. has: 5 figures, 3 tables.

SUB CODE: 07/

SUBM DATE: 24Apr65/

ORIG REF: 005/

OTH REF: 012

PC
Card 2/2

L 11028-66 EWT(m)/EWP(t)/EWP(b) IJP(c) JD/JG
 ACC NR: AP5028728 SOURCE CODE: UR/0363/65/001/011/1965/1977
 AUTHOR: Sazonova, L. V.; Davtyan, I. A.; Glushkova, V. B.
 ORG: Institute of Silicate Chemistry im. I. V. Grebenshchikov, Academy of Sciences
 SSSR (Institut khimii silikatov Akademii nauk SSSR)
 TITLE: Study of the $\text{Nd}_2\text{O}_3\text{-ZrO}_2$ system and effect of the method of preparation on
 the properties of the product obtained
 SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 11, 1965,
 1965-1977
 TOPIC TAGS: neodymium compound, zirconium compound, powder metal sintering, powder
 metal mixing, phase equilibrium, chemical composition, metal analysis, crystal
 structure
 ABSTRACT: Thermal, x-ray phase, molecular-spectroscopic and chemical methods of
 analysis were used to study the products obtained from sintering pressed powder mix-
 tures of ZrO_2 and Nd_2O_3 (in the ratios 90%:10%, 66.7%:33.3%, and 10%:90%). The mix-
 tures were prepared by combining solutions of the salts and evaporating, coprecipiti-
 ating in the amorphous state, mechanical mixing of the hydroxides and mechanical
 mixing of the oxides. Thermograms of the mixtures, curves of thermal decomposition,
 infrared spectra, and x-ray diffraction patterns of the products are given. The me-
 chanism of formation of equilibrium phases is interpreted. It is shown that the com-
 position and crystal structure of the products formed are appreciably affected by the
 method of preparation of the initial mixture. Orig. art. has: 7 figures, 3 tables.
 SUB CODE: 07,11/ SUBM DATE: 24Apr65/ ORIG REF: 005/ OTH REF: 006
 UDC: 546.657 + 546.831
 Card 1/1

SHARPEBA, V.S.; LUTMAN, I.A.; KESER, R.H.

Study of the system $\text{Nd}_2\text{O}_3 - \text{SrO}$. Regions rich in neodymium oxide. Izv. AN SSSR. Neorg. mat. 1 no.11:1955-1964 N 165.
(MIRA 18:12)

1. Institut khimii silikatoov imeni I.V. Gribanovskaya AN SSSR. Submitted April 24, 1965.

SAKONOVA, L.V.; DAVYAN, L.A.; GLIGHEOVA, V.B.

Study of the system $\text{Nd}_2\text{O}_3 - \text{ZrO}_2$ and the effect of the method of preparation on the properties of the product obtained.

Izv. AN SSSR. Neorg. mat. 1 no.11:1965-1977 N '65. (MIRA 18:12)

1. Institut khimii silykatev imeni L.V. Gribenskikh AN SSSR. Submitted April 24, 1965.

L 30250-66 EWT(m)/I/ENP(w)/ENP(t)/ETI IJP(c) WW/JD/JG

ACC NR: AP6015073

(A)

SOURCE CODE: UR/0363/66/002/005/0890/0895

AUTHOR: Davtyan, I. A.; Glushkova, V. B.; Keler, E. K.

ORG: Institute of Silicate Chemistry im. I. V. Grebenshchikov, Academy of Sciences
SSSR (Institut khimii silikatov Akademii nauk SSSR)TITLE: Effect of ¹¹europium ¹¹oxide admixtures on the polymorphism of ²¹zirconium dioxide

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 5, 1966, 890-895

TOPIC TAGS: europium compound, zirconium compound, solid solution, phase transition, crystallization, thermal analysis, x ray analysis

ABSTRACT: The ZrO_2 - Eu_2O_3 system was studied by using thermal and x-ray analysis. Addition of Eu_2O_3 was found to lower the temperature of the monoclinic-tetragonal transition of ZrO_2 considerably. Crystallization of mixtures of Eu_2O_3 and ZrO_2 , coprecipitated in the amorphous state, forms metastable cubic solid solutions of europium oxide and zirconium dioxide. The crystallization temperature and lattice parameter of the cubic solid solution increase with rising Eu_2O_3 content. The decomposition of the metastable solid solution into stable phases was investigated. It was found that the minimum addition of europium oxide required for the complete stabilization of ZrO_2 is 7 mol % Eu_2O_3 . It was shown that the addition of only 2% Eu_2O_3 eliminates the cracking of ZrO_2 during heating. A phase diagram was plotted for the phase transitions in the ZrO_2 - Eu_2O_3 system for the region rich in zirconium dioxide (see fig. 1). Orig. art. has: 5 figures, 3 tables.

Card 1/2

UDC: 546.831.4+546.661

Card 2/2

ACC NR: AF6036791

(A)

SOURCE CODE: UR/0363/66/002/011/1998/2002

AUTHOR: Davtyan, I. A.; Keler, E. K.; Glushkova, V. B.

ORG: Institute of Silicate Chemistry im. I. V. Grebenshchikov, AN SSSR (Institut Khimii silikatov AN SSSR)

TITLE: Effect of additions of germanium dioxide and yttrium and neodymium germanates on the polymorphism of zirconium dioxide

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 11, 1966, 1998-2002

TOPIC TAGS: zirconium compound, germanium compound, yttrium compound, neodymium compound, phase transition

ABSTRACT: The article considers the following questions: 1) the formation of solid solutions based on ZrO_2 with additions of GeO_2 ; 2) the stability of these solid solutions and the volatility of GeO_2 from them; and, 3) the effect of the amount of the additions of germanium dioxide in a solid solution at the temperature of the monoclinic-tetragonal transition of ZrO_2 , and the possibility of the tetragonal form of ZrO_2 . Solid solutions of zirconium with additions of 2, 5, 10, 15, and 20 mole % GeO_2 were prepared by the method of coprecipitation. In all the mixtures there was observed an exothermic effect of crystallization, and at the same time the crystallization

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UDC: 546.831.4+541.7

ACC NR: AF6036791

temperature of the product increased with an increase in the amount of additive. X ray analysis of the products indicated that additions of GeO_2 stabilize the tetragonal form of ZrO_2 only up to a temperature of 1200°C . Therefore, further experiments were undertaken with additions of GeO_2 plus oxides of rare earth elements (since oxides of the rare earth elements stabilize ZrO_2 at high temperatures). Ternary mixtures of the following composition were prepared (wt.%):

	96	90	96	90	96,7	91,7
ZrO_2	96	90	96	90	96,7	91,7
GeO_2	2	5	2	5	2	5
Y_2O_3	2	5	-	-	-	-
Nd_2O_3	-	-	2	5	1,3	3,3

It was found that stabilization of zirconium dioxide with yttrium germanates makes it possible to increase the stability of the solid solutions at high temperatures. Orig. art. has: 5 figures.

SUB CODE:07,20/ SUBM DATE: 07Jan66/ OTH REF: 001

Card 2/2

ACC NR: AP7006206

(A)

SOURCE CODE: UR/0363/67/003/001/0119/0126

AUTHOR: Glushkova, V. B.; Davtyan, I. A.; Koler, E. K.

ORG: Institute of Silicate Chemistry im. I. V. Grebenshchikov, Academy of Sciences, SSSR (Institut khimii silikatov Akademii nauk SSSR)

TITLE: Preparation and properties of yttrium and neodymium germanates

SOURCE: AN SSSR. Izvestiya. Neorganicheskkiye materialy, v. 3, no. 1, 1967, 119-126

TOPIC TAGS: yttrium compound, neodymium compound, germanate

ABSTRACT: Yttrium and neodymium germanates were prepared by both coprecipitation and mechanical mixing of the oxides, and the systems obtained ($Y_2O_3-GeO_2$ and $Nd_2O_3-GeO_2$) were subjected to differential thermal and x-ray diffraction analyses. The formation of equilibrium crystalline products was found to be complete at 1200°C in all cases. Both systems contained compounds of the compositions $Ln_2O_3:GeO_2 = 1:2, 1:1$ and $2:1$. The interplanar distances were calculated for these compounds. The behavior of the germanates at high temperatures was studied by subjecting them to prolonged isothermal firing and then to x-ray analysis. Yttrium germanates were found to be more stable than neodymium germanates at high temperatures. Orig. art. has: 6 figures and 6 tables.

SUB CODE: 07/ SUBM DATE: 29Dec65/ ORIG REF: 003/ OTH REF: 001

Card 1/1

UDC: 546.641*289

GLUSHKOVA, V. P.

USSR/Chemistry - Benzene and Naphthalene
Derivatives

sep 52

"X-Ray Investigation of the Crystals of Certain Nitro and Halogen Derivatives of Benzene and Naphthalene," G. A. Golder, G. S. Zhdanov, M. M. Umanets, and V. P. Glushkova, Phys-Chem Inst in L. Ya. Karpov, Moscow.

Zhur Fiz Khim, Vol 26, No 2, pp 1252-1265

Obtained crystals and detd elementary cells and spatial groups of the following compts: 1,2-dichloronaphthalene; 2,6-dichloro-1-nitrobenzene; 2,4,6-tribromo-1-nitrobenzene; benzophenone; and 1,3,6,8-tetranitronaphthalene (I). Checked elementary cells and spatial groups of the crystals of 1,3,6-trinitrobenzene and 2,4,6-trinitrotoluene (II). In the crystals of (I) and (II), certain interference abnormalities were detected, indicating the presence of periodic two-dimensional disturbances in the regular distribution of atomic planes.

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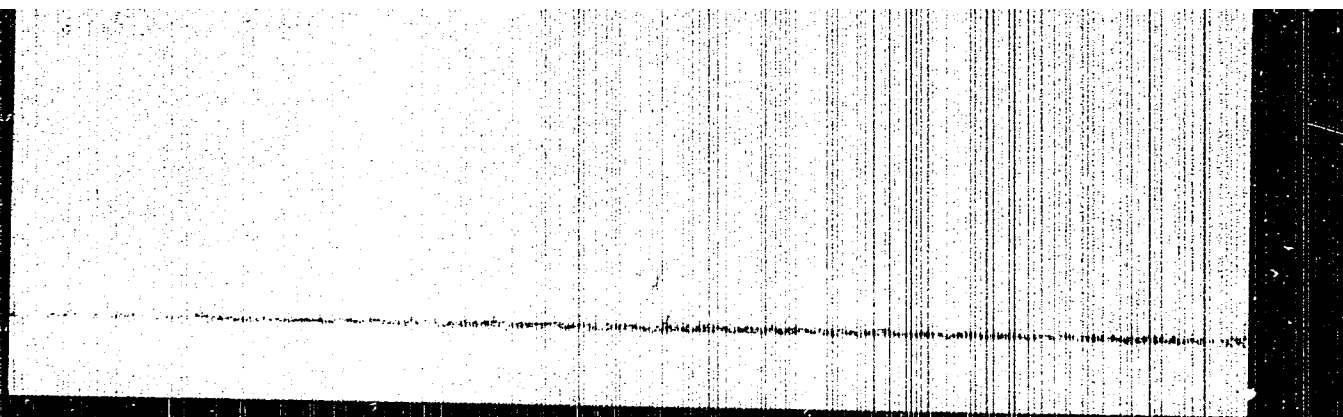
... (2-111C4H4)SbBr₃ with Al₂O₃ in EtOH and will

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APPROVED FOR RELEASE: 09/24/2001

CIA-RDP86-00513R000515430001-2"

UDANOV, G. S., KOSHEVA, E. V., SHUMOVA, E. I.

Crystallography

Crystal structure of thiocyanates. Part 9. X-ray investigations of crystals of complex hexathiocyanates of chromium, nickel and platinum. *Zhur. Fiz. Khim.* 27, no. 1, 1953.

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

GLUSHKOVA, V.P.

USSR

Isomorphism and morphotropy of molecular crystals.
 URAI, E. P. *Sov. U.S.S.R. Acad. Sci. Ser. Chem.* 1964, 12, 112.
 G. S. Zhdanov, V. A. Pospelov, M. M. Ivanov, and V. P. Glushkova. *Doklady Akad. Nauk S.S.S.R.* 1964, 199, 134.
 Crystals of the above type (comp. P and Ph) are colorless and needle-like and belong to the trigonal system. They have the configuration of a trigonal bipyramid and sym. axes of the 3rd order. In the crystals they belong to the monoclinic class, each unit cell contains 4 molecules. Crystals of crystals are yellowish. Morphotropy changes are observed when Ph is replaced by α -C₆H₄Me. Substitution of atom L causes isomorphic changes only when there are large discrepancies in radii (C₆H₅, 7.3 Å).

Michael Dymek

GLUSHKOVA, V.P.; KOCHESHKOV, K.A.

Reaction of the synthesis of thallium aromatic and heterocyclic series. Dokl. AN SSSR 103 no.4:615-618 Ag'55. (MLRA 8:11)

1. Chlen-korrespondent Akademii nauk SSSR (for Kocheshkov) 2. Fiziko-khimicheskiy institut imeni L.Ya.Karpova
(Thallium organic compounds)

GLUSHKOVA, V.P.; KOCHESHKOV, K.A.

Interaction between diaryl mercury and salts of trivalent thallium
as a method for the synthesis of ArTlX_2 compounds. Izv. AN SSSR Otd.
khim. nauk no.10:1193-1198 O '57. (MIRA 11:3)

1. Fiziko-khimicheskiy institut im. L.Ya. Karpova,
(Mercury compounds) (Thallium organic compounds)

Glushkova, V. P., Kocheshkov, A. A. 62-11-16/29

AUTHORS:

TITLE: Introduction of Thallium Into Dibenzofuran (Tallirovaniye dibenzofurana).

PERIODICAL: Izvestiya AN SSSR, Otdelenie Khimicheskikh Nauk, 1957, Nr 11, pp. 1391-1392 (USSR)

ABSTRACT: The introduction of thallium into the amisol and tiophen by the aid of salts of organic acids of the trivalent thallium was carried out by the authors (reference 1) and it was shown that this leads towards thalliumorganic compounds of the class $ArTJX_2$ and not - as maintained by the American authors (reference 2) - towards compound of the class Ar_2TJX . Here the behaviour of the dibenzofuran with regard to the salts of organic acids was compared with that with regard to the halogen-salts of the trivalent thallium. It was shown that the introduction of thallium as also in previous cases leads to the class $ArTJX_2$. Furthermore it is shown that the introduction of thallium with regard to oxygen does not lead to the para-position but to the orthoposition. There are 7 references, 2 of

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Introduction of Thallium Into Dibenzofuran.

62-11-16/29

which are Slavic.

ASSOCIATION: Physico-Chemical Institute imeni L. Ya. Karpov (Fiziko-khimicheskiy institut im. L. Ya. Karpova).

SUBMITTED: July 5, 1957.

AVAILABLE: Library of Congress

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